BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In The Matter of	)	
	)	
Revision of the Commission's rules to ensure compatibility with enhanced 911 emergency calling systems	)	**CC Docket No. 94-102 RM-8143**
	)	
	)	

To: The Commission

COMMENTS
OF
WATERWAY COMMUNICATIONS SYSTEM, INC.

Waterway Communications System, Inc. (WATERCOM), respectfully submits its comments responsive to the Notice of Proposed Rulemaking issued by the Commission looking toward adoption of regulations to ensure compatibility of wireless services with enhanced 911 emergency calling systems.[1/]

I. Introductory Statement.

A. Statement of Interest.

WATERCOM is a Commercial Mobile Radio Service provider, rendering service to the maritime community along the inland waterway transportation network comprised of the Mississippi, Illinois and Ohio Waterways and the Gulf Intracoastal Waterway via an Automated Maritime Telecommunications System (AMTS) licensed under Part 80 of

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1/ 9 FCC Rcd 6170 (1994).

the Commission's regulations. WATERCOM operates fifty-four (54) coast stations along the 4,000-mile corridor served by its system, with network control and management being provided through its Operations and Control Center (OCC) at Jeffersonville, Indiana. As a CMRS provider, WATERCOM is vitally interested in all regulations adopted by the Federal Communications Commission involving wireless services.

II. Comments.

A. Goals and Objectives.

This rulemaking represents a confluence of two (2) independent developments in the communications environment. On the one hand, 911 emergency response service has been enhanced from routing calls to a public safety answering point (PSAP) for centralized handling to providing the PSAP with automatic number identification (ANI) of the calling party, calling party location through cross-referencing the ANI with an automatic location identification (ALI) database, and even selective routing of calls to the most geographically appropriate PSAP. Contemporaneously, the use of wireless technology is mushrooming, through growth of cellular subscribers and the imminent initiation of new personal communications services. The multiple new satellite services in the offing create another dimension to the spiraling growth of wireless services. Given the inherent itinerant nature of wireless services, the enhanced 911 emergency response features are rendered null and void when calls are placed from wireless communications devices.

The Commission in this rulemaking seeks to assure that users of wireless systems have the full benefit of enhanced 911 services by requiring wireless systems to convey relevant user information, and concomitantly that 911 PSAPs are fully enabled to direct responses to emergency calls.

B. Scope of Requirement for Wireless Technology Compatibility with 911 Emergency Calling Systems.

The Commission proposes that *all* CMRS offering access to real-time voice services available on the public switched network be subjected to enhanced 911 compatibility requirements. The Commission questions whether this is an appropriate scope of coverage, or whether particular CMRS or other services should be excluded from or included within the scope of coverage.[2/] WATERCOM respectfully submits that subjecting all CMRS providers offering access to real-time voice services on the public switched network is overly-inclusive. In particular, maritime services should be excluded from any requirements imposed by this rulemaking.[3/]

The rationale for extending enhanced 911 compatibility requirements to wireless services is reflected in the

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[2/] Notice at ¶ 38.

[3/] WATERCOM foresees that other services, e.g., airborne CMRS, will be similarly situated for similar rationale as applies to excluding maritime from 911 compatibility requirements. Undoubtedly, those service providers will be so advising the Commission independently.

premise stated in the Commission's Notice that: "Wireless customers clearly expect access to 911 services, and may be unaware that their mobile radio services do not provide the kind of location information that emergency services personnel receive from stations on the wireline network."[4/] This premise clearly is limited to land-based CMRS users; in a maritime environment, users do NOT expect access to 911 services, and certainly have no expectation based upon their land-side utilization of wireline telephone service of access to the emergency response network.[5/] Safety, health and other emergency situations encountered on the waterways are handled by the Coast Guard -- not via 911 public safety answering points.[6/]

[4/] Notice at ¶ 37.

[5/] Since wireline services are not available in the maritime environment, there obviously can be no expectation by maritime communications service users that emergency response personnel receiving a radio call would receive location information automatically as they would receive via the wireline network from their land-based homes or offices.

[6/] Undoubtedly, PSAPs have received calls relating to injured mariners. Generally, these calls are relayed by the Coast Guard, which receives the initial call, screens the call for the nature of the emergency and the vessel location, and then either responds to the emergency or relays the information to the PSAP or appropriate hospital or other response center which geographically is positioned to render assistance. Recreational boaters also may place 911 calls; however, these customarily would be placed through cellular systems. Recreational boaters operating in the VHF maritime bands either would call the Coast Guard on the Channel 16 Distress, Safety and Calling channel or,

(continued...)

From a practical standpoint, there are significant operational differences between cellular and PSC systems on the one hand and the WATERCOM Automated Maritime Telecommunications System and other maritime services on the other so to render the principles and procedures at issue in this rulemaking inapplicable to the maritime environment. In cellular service, the cell site serving radius is approximately 5-7 miles. That service radius is expected to be less in PCS systems. By contrast, with 54 stations serving 4,000 miles of inland waterways, WATERCOM's average shore station service radius is 37 miles. Moreover, being located in rural areas and engineered to optimize coverage of the waterway network, WATERCOM's shore stations in many cases are located approximately 20 miles from their points of interconnection with the local exchange telephone carrier. Further, maritime channels of commerce constitute state boundaries; accordingly, a vessel in distress

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[6/] (...continued)
alternatively, would place the call to a common carrier or other service supplier (e.g., a boat supply store operating a private coast station). Since these calls are manually answered, the responding operator would be in a position to screen for necessary information before requesting emergency response. Only WATERCOM provides fully automated direct-dial maritime service. To the extent that vessel users may employ DTMF signalling on their VHF maritime radios, such radios are part of the general maritime communications network, and are not dedicated to CMRS services. Accordingly, said radios would be outside the scope of this proceeding.

potentially may be located nearest a port in up to one of four (4) states.[7/] It would be problematic whether a vessel in distress would be within the response area of the PSAP serving the WATERCOM shore station. 911 emergency response services simply are not designed or equipped to provide coverage over such extended areas involving multiple state jurisdictions. Moreover, whether 911 service even is available at all in some of these rural areas is open to question.

C. Imposition of 911 Emergency Response Compatibility Would Require Major Revisions of the WATERCOM Network.

The WATERCOM system was designed in the mid-1980s to meet the specific operating requirements of the commercial maritime industry operating along the inland rivers transportation network. The WATERCOM system, hardware and software, was custom designed to meet not only the service needs of the user community, but also the operational and economic requirements of the ribbon-like environment in which the system renders service.

To achieve 911 service compatibility, WATERCOM would be required to undertake substantial modifications to its entire system, including vessel stations, shore stations and

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[7/] Along the Mississippi River, for example, Kentucky, Missouri and Tennessee lie adjacent to each other, as do Arkansas, Missouri and Tennessee; and there is less than 40 miles separating Arkansas and Kentucky where their borders are defined by the Mississippi River.

the Operations and Control Center. Initially, the WATERCOM system does not recognize a three-digit dialing code. Accordingly, each vessel station and all shore stations would need major software modification. In that the overwhelming majority of customer installations are on towing vessels which operate on an around-the-clock basis (unless in dock for maintenance), servicing of vessel stations requires sending a technician to a moving vessel so that the radio or other equipment may be serviced while the vessel is in operation. This is an extremely costly and burdensome procedure. The estimated cost to modify the network to accommodate dialing the three-digit 911 code ranges between $275,000 and $300,000.

Furthermore, the Commission's proposal would require ANI and ALI. However, none of the switches used at the 54 shore stations or at the OCC have the capability to transfer data by any means other than DTMF digits, and DTMF would not be an adequate and reliable means for data transfer. Moreover, as described above, shore station location does not equate to vessel station location. As contrasted with cellular and PCS, the maritime shore station location does not provide the caller's approximate location within a few square miles.[8/] Nor do WATERCOM's shore stations conduct

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[8/] Notice at ¶ 45.

radio signal magnitude analysis. Accordingly, ALI capability would, from a practical standpoint, require retrofitting each vessel station with GPS and providing for the automatic relay of GPS data through the radio signal. This, too, would be cost-prohibitive.[9/]

Additionally, WATERCOM has no means of providing call priority for 911 calls. Due to the extremely limited number of channels available to WATERCOM,[10/] the WATERCOM system simply is not designed to provide for queueing of calls.

Finally, with regard to common channel signalling, these features contemplate telephone industry SS7 systems and protocols. Again, WATERCOM utilizes switches specifically designed to meet its operation requirements; it does not employ SS7 signalling.

As an alternative to technical compliance, the Commission suggests labeling of non-complying equipment. While a warning label may be the only appropriate regulatory

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9/ Using the mid-range from APCO's estimate of $10,000-$40,000 cost per base station for each of WATERCOM's 54 shore stations, ALI installation would amount to $1,350,000. This does not include vessel station costs.

10/ WATERCOM is licensed on 40 AMTS channels. These channels must be distributed among shore stations to avoid generating interference between co-channel assignments at adjacent stations. The channel assignment requirement is most acute in the high-traffic areas where river channels cross, e.g., New Orleans, where the Mississippi River and Gulf Intracoastal Waterways intersect. Additionally, one channel at each site must be designated in primary service as a calling channel.

measure for maritime systems, the language of the suggested label presupposes that users would contemplate the availability of 911 emergency service in the maritime environment. It would be misleading to require that maritime communications equipment bear labeling which states that "You may use this transmitter to dial for help through 911..."[11/] since, as discussed above, the PSAP likely would not be in a position to render assistance in any case.

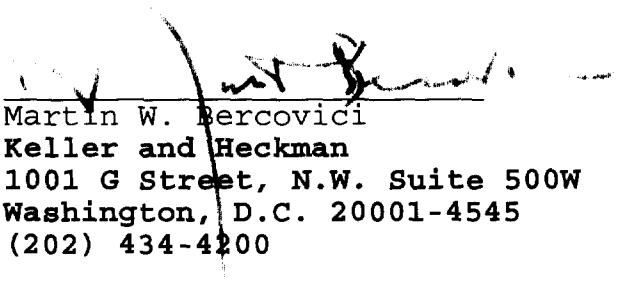
In conclusion, WATERCOM respectfully urges the Commission to return to its initial premise, i.e., that it "address enhanced 911 and other related issues with regard to PCS, cellular, and any other relevant mobile service."[12/] As clearly demonstrated above, maritime CMRS is not a "relevant" mobile service for requiring compatibility with enhanced 911 emergency calling systems. Accordingly, any rules and requirements adopted in this proceeding should suitably define and limit the scope of covered services to the exclusion of maritime CMRS.

11/ Notice at ¶ 55.

12/ Notice at ¶ 34.

WHEREFORE, THE PREMISES CONSIDERED, Waterway Communications System, Inc. respectfully urges the Federal Communications Commission to EXEMPT maritime radio services from enhanced 911 emergency calling system compatibility requirements.

Respectfully Submitted,



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